

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: 09/490,064
Source: 1600
Date Processed by STIC: 03-17-2005

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1600

RAW SEQUENCE LISTING DATE: 03/17/2005
 PATENT APPLICATION: US/09/490,064 TIME: 12:08:53

Input Set : N:\Crf3\RULE60\09490064.raw.txt
 Output Set: N:\CRF4\03172005\I490064.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:
 5 (i) APPLICANT: Knappik, Achim
 6 Pack, Peter
 7 Ilag, Vic
 8 Ge, Liming
 9 Moroney, Simon
 10 Plueckthun, Andreas
 13 (ii) TITLE OF INVENTION: Protein/(Poly)peptide libraries
 15 (iii) NUMBER OF SEQUENCES: 373
 17 (iv) CORRESPONDENCE ADDRESS:
 18 (A) ADDRESSEE: James F. Haley, Jr., Esq. c/o Fish & Neave
 19 (B) STREET: 1251 Avenue of the Americas
 20 (C) CITY: New York
 21 (D) STATE: New York
 22 (E) COUNTRY: USA
 23 (F) ZIP: 10021
 25 (v) COMPUTER READABLE FORM:
 26 (A) MEDIUM TYPE: Floppy disk
 27 (B) COMPUTER: IBM PC compatible
 28 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 29 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
 31 (vi) CURRENT APPLICATION DATA:
 C--> 32 (A) APPLICATION NUMBER: US/09/490,064
 C--> 33 (B) FILING DATE: 24-Jan-2000
 35 (vii) PRIOR APPLICATION DATA:
 W--> 36 (A) APPLICATION NUMBER: US/09/025,769
 37 (B) FILING DATE: 18-FEB-1998
 W--> 38 (A) APPLICATION NUMBER: EP 95 11 3021.0
 39 (B) FILING DATE: 18-AUG-1995
 41 (viii) ATTORNEY/AGENT INFORMATION:
 42 (A) NAME: James F. Haley, Jr., Esq.
 43 (B) REGISTRATION NUMBER: 27,794
 44 (C) REFERENCE/DOCKET NUMBER: MORPHO/5
 46 (ix) TELECOMMUNICATION INFORMATION:
 47 (A) TELEPHONE: (212)596-9000
 48 (B) TELEFAX: (212)596-9090
 50 (2) INFORMATION FOR SEQ ID NO: 1:
 52 (i) SEQUENCE CHARACTERISTICS:
 53 (A) LENGTH: 20 amino acids
 54 (B) TYPE: amino acid
 55 (C) STRANDEDNESS:
 56 (D) TOPOLOGY: linear

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58      (ii) MOLECULE TYPE: protein
63      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
65      Ala Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Gly
66      1          5          10          15
68      Gly Gly Gly Ser
69      20
71 (2) INFORMATION FOR SEQ ID NO: 2:
73      (i) SEQUENCE CHARACTERISTICS:
74          (A) LENGTH: 82 base pairs
75          (B) TYPE: nucleic acid
76          (C) STRANDEDNESS: single
77          (D) TOPOLOGY: linear
79      (ii) MOLECULE TYPE: other nucleic acid
80          (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
85      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
87 TCAGCGGGTG GCGGTTCTGG CCGCGGTGGG AGCGGTGGCG GTGGTTCTGG CCGTGGTGGT      60
89 TCCGATATCG GTCCACGTAC GG                                          82
91 (2) INFORMATION FOR SEQ ID NO: 3:
93      (i) SEQUENCE CHARACTERISTICS:
94          (A) LENGTH: 83 base pairs
95          (B) TYPE: nucleic acid
96          (C) STRANDEDNESS: single
97          (D) TOPOLOGY: linear
99      (ii) MOLECULE TYPE: other nucleic acid
100          (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
105      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
107 AATTCCGTAC GTGGACCGAT ATCGGAACCA CCACCGCCAG AACCACCGCC ACCGCTCCCA      60
109 CCGCCGCCAG AACCGCCACC CGC                                          83
111 (2) INFORMATION FOR SEQ ID NO: 4:
113      (i) SEQUENCE CHARACTERISTICS:
114          (A) LENGTH: 69 base pairs
115          (B) TYPE: nucleic acid
116          (C) STRANDEDNESS: single
117          (D) TOPOLOGY: linear
119      (ii) MOLECULE TYPE: other nucleic acid
120          (A) DESCRIPTION: /desc = "synthetic oligonucleotide
W--> 121                      library"
124      (ix) FEATURE:
125          (A) NAME/KEY: misc_feature
126          (B) LOCATION:28..45
127          (D) OTHER INFORMATION:/product= "6 random codons by
128 trinucleotide mutagenesis (19aa, no Cys)"
131      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
133 GATACGGCCG TGTATTATTG CGCGCGTNNK NKNKNNKNNK NKNKNGATTA TTGGGGCCAA      60
135 GGCACCCTG                                          69
137 (2) INFORMATION FOR SEQ ID NO: 5:
139      (i) SEQUENCE CHARACTERISTICS:
140          (A) LENGTH: 84 base pairs
141          (B) TYPE: nucleic acid

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142         (C) STRANDEDNESS: single
143         (D) TOPOLOGY: linear
145     (ii) MOLECULE TYPE: other nucleic acid
146         (A) DESCRIPTION: /desc = "synthetic oligonucleotide
W--> 147         library"
150     (ix) FEATURE:
151         (A) NAME/KEY: misc_feature
152         (B) LOCATION:28..57
153         (D) OTHER INFORMATION:/product= "10 random codons by
154 trinucleotide mutagenesis (19aa, no Cys)"
156     (ix) FEATURE:
157         (A) NAME/KEY: misc_feature
158         (B) LOCATION:58..60
159         (D) OTHER INFORMATION:/product= "random codon by
160 trinucleotide mutagenesis (TTT/ATG)"
162     (ix) FEATURE:
163         (A) NAME/KEY: misc_feature
164         (B) LOCATION:64..66
165         (D) OTHER INFORMATION:/product= "random codon by
166 trinucleotide mutagenesis (GTT/TAT)"
169     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
171 GATACGGCCG TGTATTATTG CGCGCGTNNK NKNKNKNKNK NKNKNKNKNK KNNKNKNKWK 60
173 GATKWTGGG GCCAAGGCAC CCTG 84
175 (2) INFORMATION FOR SEQ ID NO: 6:
177     (i) SEQUENCE CHARACTERISTICS:
178         (A) LENGTH: 21 base pairs
179         (B) TYPE: nucleic acid
180         (C) STRANDEDNESS: single
181         (D) TOPOLOGY: linear
183     (ii) MOLECULE TYPE: other nucleic acid
184         (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
189     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
191 GATACGGCCG TGTATTATTG C 21
193 (2) INFORMATION FOR SEQ ID NO: 7:
195     (i) SEQUENCE CHARACTERISTICS:
196         (A) LENGTH: 17 base pairs
197         (B) TYPE: nucleic acid
198         (C) STRANDEDNESS: single
199         (D) TOPOLOGY: linear
201     (ii) MOLECULE TYPE: other nucleic acid
202         (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
207     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
209 CAGGGTGCCT TGGCCCC 17
211 (2) INFORMATION FOR SEQ ID NO: 8:
213     (i) SEQUENCE CHARACTERISTICS:
214         (A) LENGTH: 17 base pairs
215         (B) TYPE: nucleic acid
216         (C) STRANDEDNESS: single
217         (D) TOPOLOGY: linear

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219 (ii) MOLECULE TYPE: other nucleic acid
 220 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
 225 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
 227 GCAGAAGGCG AACGTCC 17
 229 (2) INFORMATION FOR SEQ ID NO: 9:
 231 (i) SEQUENCE CHARACTERISTICS:
 232 (A) LENGTH: 80 base pairs
 233 (B) TYPE: nucleic acid
 234 (C) STRANDEDNESS: single
 235 (D) TOPOLOGY: linear
 237 (ii) MOLECULE TYPE: other nucleic acid
 238 (A) DESCRIPTION: /desc = "synthetic oligonucleotide
 W--> 239 library"
 242 (ix) FEATURE:
 243 (A) NAME/KEY: misc_feature
 244 (B) LOCATION:39..41
 245 (D) OTHER INFORMATION:/product= "random codon (mixture of
 246 GCT, CGT, CAT, TCT, TAT)"
 248 (ix) FEATURE:
 249 (A) NAME/KEY: misc_feature
 250 (B) LOCATION:42..53
 251 (D) OTHER INFORMATION:/product= "random codons by
 252 trinucleotide mutagenesis (19 aa, no Cys)"
 254 (ix) FEATURE:
 255 (A) NAME/KEY: misc_feature
 256 (B) LOCATION:57..59
 257 (D) OTHER INFORMATION:/product= "random codon by
 258 trinucleotide mutagenesis (19 aa, no Cys)"
 261 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
 263 TGGAAGCTGA AGACGTGGGC GTGTATTATT GCCAGCAGBV TNNKNNKNNK NNNCCGNNKT 60
 265 TTGGCCAGGG TACGAAAGTT 80
 267 (2) INFORMATION FOR SEQ ID NO: 10:
 269 (i) SEQUENCE CHARACTERISTICS:
 270 (A) LENGTH: 18 base pairs
 271 (B) TYPE: nucleic acid
 272 (C) STRANDEDNESS: single
 273 (D) TOPOLOGY: linear
 275 (ii) MOLECULE TYPE: other nucleic acid
 276 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
 281 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
 283 AACTTTCGTA CCCTGGCC 18
 285 (2) INFORMATION FOR SEQ ID NO: 11:
 287 (i) SEQUENCE CHARACTERISTICS:
 288 (A) LENGTH: 108 base pairs
 289 (B) TYPE: nucleic acid
 290 (C) STRANDEDNESS: single
 291 (D) TOPOLOGY: linear
 293 (ii) MOLECULE TYPE: other nucleic acid
 294 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"

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W--> 295                                library"
298      (ix) FEATURE:
299          (A) NAME/KEY: misc_feature
300          (B) LOCATION:21..23
301          (D) OTHER INFORMATION:/product= "random codon by
302 trinucleotide mutagenesis (19aa, no Cys)"
304      (ix) FEATURE:
305          (A) NAME/KEY: misc_feature
306          (B) LOCATION:27..35
307          (D) OTHER INFORMATION:/product= "random codons by
308 trinucleotide mutagenesis (19 aa, no Cys)"
310      (ix) FEATURE:
311          (A) NAME/KEY: misc_feature
312          (B) LOCATION:36..41
313          (D) OTHER INFORMATION:/product= "random codons by mixed
314 monomers (A/G A/C/G T)"
316      (ix) FEATURE:
317          (A) NAME/KEY: misc_feature
318          (B) LOCATION:42..44
319          (D) OTHER INFORMATION:/product= "random codon by
320 trinucleotide mutagenesis (19aa, no Cys)"
322      (ix) FEATURE:
323          (A) NAME/KEY: misc_feature
324          (B) LOCATION:48..50
325          (D) OTHER INFORMATION:/product= "random codon by
326 trinucleotide mutagenesis (19aa, no Cys)"
329      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
331 AGGGTCTCGA GTGGGTGAGC NNKATTNNKN NKNNKRVTRV TMNKACCNK TATGCCGATA      60
333 GCGTGAAAGG CCGTTTTACC ATTTACGTG ATAATTCGAA AAACACCA      108
335 (2) INFORMATION FOR SEQ ID NO: 12:
337      (i) SEQUENCE CHARACTERISTICS:
338          (A) LENGTH: 105 base pairs
339          (B) TYPE: nucleic acid
340          (C) STRANDEDNESS: single
341          (D) TOPOLOGY: linear
343      (ii) MOLECULE TYPE: other nucleic acid
344          (A) DESCRIPTION: /desc = "synthetic oligonucleotide
W--> 345                                library"
348      (ix) FEATURE:
349          (A) NAME/KEY: misc_feature
350          (B) LOCATION:21..23
351          (D) OTHER INFORMATION:/product= "random codon by
352 trinucleotide mutagenesis (19aa, no Cys)"
354      (ix) FEATURE:
355          (A) NAME/KEY: misc_feature
356          (B) LOCATION:27..32
357          (D) OTHER INFORMATION:/product= "random codons by
358 trinucleotide mutagenesis (19aa, no Cys)"
360      (ix) FEATURE:

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VERIFICATION SUMMARY

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Input Set : N:\Crf3\RULE60\09490064.raw.txt

Output Set: N:\CRF4\03172005\I490064.raw

L:32 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:33 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:38 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1)(vii)
L:1569 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1573 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1577 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1581 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1585 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1589 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1593 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1656 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1660 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1664 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1668 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1672 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1676 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1680 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1736 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1740 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1744 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1748 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1752 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1756 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1760 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1764 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1823 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1827 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1831 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1835 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1839 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1843 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1847 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1903 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1907 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1911 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1915 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1919 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1923 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1927 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1983 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:1987 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:1991 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:1995 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:1999 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:2003 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:2007 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:2063 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2067 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56

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L:2071 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2075 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2079 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2083 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2087 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2091 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56